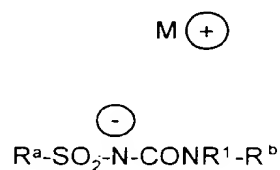


Patent claims:

1. A formulation, comprising
- 5 a) at least one phosphonium or sulfonium salt of a sulfonylurea, where the phosphonium and sulfonium cation of the salt has at least one substituent which is different from hydrogen, and
- b) customary auxiliaries and additives.
2. A formulation according to claim 1, comprising at least one
- 10 quaternary phosphonium salt or at least one tertiary sulfonium salt of a sulfonylurea.
3. A formulation according to claim 1 or 2, comprising at least one
- 15 sulfonylurea salt of the formula (Ia)

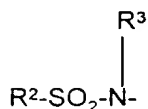


(Ia)

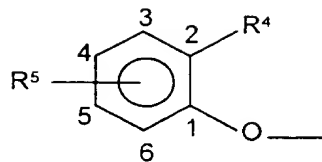
20 in which R^{a} is a substituted aliphatic, aromatic or heterocyclic radical or an electron-withdrawing group, such as a substituted sulfonamide radical;

preferably

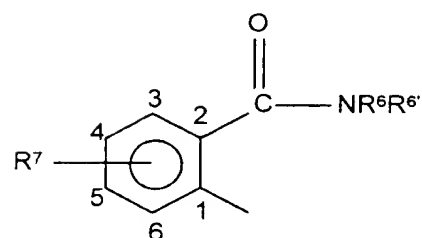
25 R^{a} is a radical of the formula II-IVc,



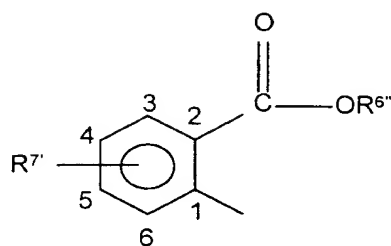
(II)



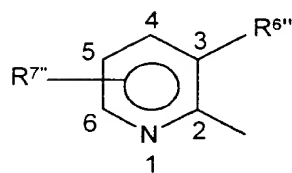
(III)



(IVa)

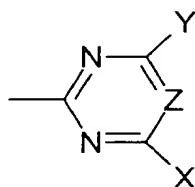


(IVb)



(IVc)

- 5 R^b is a heterocyclyl radical, preferably a nitrogen-containing heterocyclyl radical, particularly preferably a heterocyclyl radical having 2 or 3 nitrogen atoms in the ring, very particularly preferably a radical



10

in which

R^1 is H or a C_1 - C_{10} -hydrocarbon radical, such as (C_1 - C_6)-alkyl,

- 15 R^2 is a substituted or unsubstituted C_1 - C_{20} -hydrocarbon radical, such as substituted or unsubstituted (C_1 - C_6)-alkyl, substituted or unsubstituted (C_2 - C_6)-alkenyl, substituted or unsubstituted (C_2 - C_6)-alkynyl, substituted or unsubstituted (C_3 - C_7)-cycloalkyl,

- 20 R^3 is a substituted or unsubstituted C_1 - C_{20} -hydrocarbon radical, such as substituted or unsubstituted (C_1 - C_6)-alkyl, substituted or

unsubstituted (C₂-C₆)-alkenyl, substituted or unsubstituted (C₂-C₆)-alkynyl, substituted or unsubstituted (C₃-C₇)-cycloalkyl,

5 R^4 is halogen, such as F, Cl, Br, I, or a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical or C₁-C₂₀-hydrocarboxy radical, such as (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, (C₃-C₆)-alkenyloxy, (C₃-C₆)-alkynyloxy, where the 6 last-mentioned radicals may be substituted by one or more radicals, preferably from the group consisting of halogen, such as F, Cl, Br or I, and (C₁-C₃)-alkoxy,

15 R^5 is H, halogen, such as F, Cl, Br, I, or a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical or C₁-C₂₀-hydrocarboxy radical, such as (C₁-C₆)-alkyl, which may be substituted by one or more radicals from the group consisting of halogen, such as F, Cl, Br or I, and (C₁-C₃)-alkoxy, or (C₁-C₅)-alkoxy which may be substituted by one or more radicals from the group consisting of halogen (F, Cl, Br, I) and (C₁-C₃)-alkoxy,

20 R^6 and $R^{6'}$ are identical or different and are H or a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical, such as C₁-C₆-alkyl (for example Me, Et, ⁿPr, ⁱPr, ^cPr), where R^6 and $R^{6'}$ may form an unsubstituted or substituted ring,

25 R^7 is H, halogen, such as F, Cl, Br or I, OH, $NR^X R^Y$, in which R^X and R^Y are H or (C₁-C₃)-alkyl, or R^7 is N-(C₁-C₃)-alkyl-N-acylamino or N-acylamino or a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical or hydrocarboxy radical, such as (C₁-C₃)-alkyl, (C₁-C₃)-haloalkyl, halogen, (C₁-C₃)-alkyl-(N-(C₁-C₃)-alkyl-N-acylamino), (C₁-C₃)-alkyl-(N-acylamino) or (C₁-C₃)-alkoxy,

35 $R^{6''}$ is a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical, such as substituted or unsubstituted (C₁-C₆)-alkyl, substituted or unsubstituted (C₃-C₆)-alkenyl, substituted or unsubstituted (C₃-C₆)-cycloalkyl, substituted or unsubstituted (C₃-C₇)-alkynyl, substituted or unsubstituted (C₄-C₈)-cycloalkylalkyl,

5 $R^{7'}$ is H, halogen, such as F, Cl, Br or I, OH, $NR^X R^Y$, in which R^X and R^Y are H or (C₁-C₃)-alkyl, or $R^{7'}$ is N-(C₁-C₃)-alkyl-N-acylamino, N-acylamino or a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical or C₁-C₂₀-hydrocarbonoxy radical, such as (C₁-C₃)-alkyl, (C₁-C₃)-haloalkyl, (C₁-C₃)-alkyl-(N-(C₁-C₃)-alkyl-N-acylamino), (C₁-C₃)-alkyl-(N-acylamino) or (C₁-C₃)-alkoxy,

10 $R^{6''}$ is halogen, such as F, Cl, Br or I, or a substituted or unsubstituted C₁-C₂₀-hydrocarbon-containing radical, such as (C₁-C₆)-alkyl, which may be substituted by one or more radicals from the group consisting of halogen (F, Cl, Br, I) and (C₁-C₃)-alkoxy, (C₁-C₆)-alkoxy which may be substituted by one or more radicals from the group consisting of halogen (F, Cl, Br, I) or (C₁-C₃)-alkoxy, substituted or unsubstituted alkoxycarbonyl, substituted or unsubstituted dialkylaminocarbonyl, substituted or unsubstituted (C₁-C₆)-alkylsulfonyl, (C₁-C₆)-mono- or -dialkylamino, N-(C₁-C₆)-alkyl-N-acylamino or N-acylamino,

20 $R^{7''}$ is H, halogen, such as F, Cl, Br, I, OH, $NR^X R^Y$, in which R^X and R^Y are H or (C₁-C₃)-alkyl, or $R^{7''}$ is a substituted or unsubstituted C₁-C₂₀-hydrocarbon radical or hydrocarbonoxy radical, such as (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₁-C₆)-alkoxy or (C₁-C₆)-haloalkoxy,

25 M^+ is a quaternary phosphonium ion or a tertiary sulfonium ion,

30 X is substituted or unsubstituted (C₁-C₆)-alkyl, substituted or unsubstituted (C₁-C₆)-alkoxy, halogen, such as F, Cl, Br or I, substituted or unsubstituted (C₁-C₆)-mercaptoalkyl or (C₁-C₃)-mono- or (C₁-C₃)-dialkylamino,

35 Y is substituted or unsubstituted (C₁-C₆)-alkyl, substituted or unsubstituted (C₁-C₆)-alkoxy, halogen, such as F, Cl, Br or I, substituted or unsubstituted (C₁-C₆)-mercaptoalkyl or (C₁-C₃)-mono- or (C₁-C₃)-dialkylamino, and

Z is C-halogen, such as CF, CCl, CBr or Cl, CH or N.

4. A formulation as claimed in one or more of claims 1 to 3, comprising one or more agrochemicals which are different from the sulfonylurea salt defined in claim 1, such as herbicides, fungicides, insecticides, growth regulators, safeners, fertilizers.
5. A formulation as claimed in one or more of claims 1 to 4, comprising a wetting agent having bioactivating properties or a mixture of different wetting agents having bioactivating properties.
6. A formulation as claimed in one or more of claims 1 to 5, comprising a pH-stabilizing substance or substance mixture.
7. A formulation as claimed in one or more of claims 1 to 6, comprising a substance or a substance mixture having antifoam properties.
8. A formulation as claimed in one or more of claims 1 to 7, comprising a substance or a substance mixture which acts as acid scavenger.
9. A formulation as claimed in one or more of claims 1 to 8, comprising a substance or a substance mixture which acts as water scavenger.
10. A formulation as claimed in one or more of claims 1 to 9, comprising a substance or a substance mixture which acts as crystallization inhibitor.
11. A formulation according to one or more of claims 1 to 10, comprising a surfactant or surfactant mixture.
12. A formulation as claimed in one or more of claims 1 to 11, comprising in general 00.1-70.0% by weight of one or more phosphonium or sulfonium salts of sulfonylureas, in general 5.0-95.0% by weight of a polar and/or hydrophobic solvent, in general 2.0-40.0% by weight of a mixture of anionic and nonionic surfactants or a mixture of cationic and nonionic surfactants.

13. The use of the formulation as claimed in one or more of claims 1 to 12 as herbicidal or plant-growth-regulating composition.
14. A compound of the formula (Ia) as defined in claim 3.
15. A compound of the formula (Ia) as claimed in claim 14, in which
- R^1 is H or Me,
- R^2 is (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl, in particular Me and Et,
- R^3 is (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl, in particular Me and Et,
- R^4 is (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl or (C₁-C₆)-alkoxy, in particular Me, Et, OMe, OEt or CF₃,
- R^5 is H, halogen, such as F, Cl, Br or I, OMe, OEt, Me, CF₃, where the radicals R^5 in the formula (III) which are different from hydrogen are preferably located in the 5-position on the phenyl ring,
- R^6 and $R^{6'}$ are identical or different C₁-C₆-alkyl radicals, preferably $R^6 = \text{Me}$, $R^{6'} = \text{Me}$; $R^6 = \text{Me}$, $R^{6'} = \text{Et}$ and $R^6 = \text{Et}$, $R^{6'} = \text{Et}$,
- R^7 is H, Me, Et, CF₃, F, Cl, Br, I, N[(C₁-C₃)-alkyl]- R^8 , NH- R^9 , CH₂N[(C₁-C₃)-alkyl]- R^{10} , CH₂NH- R^{11} , CH₂CH₂N[(C₁-C₃)-alkyl]- R^{12} , CH₂CH₂NH- R^{13} , where the radicals R^7 in the formula (IVa) which are different from hydrogen are preferably located in the 5-position on the phenyl ring and the radicals R^8 to R^{13} are H, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, CHO, COO(C₁-C₆)-alkyl, COO(C₁-C₆)-haloalkyl, SO₂-(C₁-C₆)-alkyl, SO₂-(C₁-C₆)-haloalkyl, CO-(C₁-C₆)-alkyl or CO-(C₁-C₆)-haloalkyl,
- $R^{6''}$ is Me, Et, ⁿPr, ⁱPr, ^cPr, ⁿBu, ⁱBu, ^sBu, ^tBu, ^cBu, in particular Me or Et,

5 $R^{7'}$ is H, Me, Et, CF_3 , F, Cl, Br, I, $N[(C_1-C_3)\text{-alkyl}]\text{-}R^8$, $NH\text{-}(C_1-C_3)\text{-alkyl}$, $CH_2N[(C_1-C_3)\text{-alkyl}]\text{-}R^{10}$, $CH_2NH\text{-}R^{11}$, $CH_2CH_2N[(C_1-C_3)\text{-alkyl}]\text{-}R^{12}$, $CH_2CH_2NH\text{-}R^{13}$, where the radicals $R^{7'}$ in the formula (IVb) which are different from hydrogen are preferably located in the 5-position on the phenyl ring and the radicals R^8 and R^{10} to R^{13} are H, $(C_1-C_6)\text{-alkyl}$, $(C_1-C_6)\text{-haloalkyl}$, CHO , $COO(C_1-C_6)\text{-alkyl}$, $COO(C_1-C_6)\text{-haloalkyl}$, $SO_2\text{-}(C_1-C_6)\text{-alkyl}$, $SO_2\text{-}(C_1-C_6)\text{-haloalkyl}$, $CO\text{-}(C_1-C_6)\text{-alkyl}$ or $CO\text{-}(C_1-C_6)\text{-haloalkyl}$,

10 $R^{6''}$ is Me, Et, Pr, $CH_2CH_2CF_3$, OMe, OEt, O^iPr , OCH_2CH_2Cl , F, Cl, COOMe, COOEt, COO^nPr , COO^iPr , $CONMe_2$, $CONEt_2$, SO_2Me , SO_2Et , SO_2^iPr , unsubstituted or substituted $NH\text{-}(C_1-C_6)\text{-alkyl-acyl}$, unsubstituted or substituted $NH\text{-}(C_3-C_7)\text{-cycloalkyl}$, unsubstituted or substituted $(C_4-C_8)\text{-cycloalkylalkyl}$, unsubstituted or substituted N- $(C_3-C_7)\text{-cycloalkyl-aryl}$, unsubstituted or substituted N- $(C_4-C_8)\text{-cycloalkylalkyl-acyl}$, preferably N- $(C_1-C_6)\text{-alkyl-CHO}$, N- $(C_1-C_6)\text{-alkyl-CO-R}$, N- $(C_1-C_6)\text{-alkyl-SO}_2R$, $NH\text{-CHO}$, $NH\text{-CO-R}$, $NHSO_2R$, where the radicals R are $(C_1-C_6)\text{-(halo)-alkyl}$, $(C_1-C_6)\text{-(halo)-alkoxy}$, $(C_1-C_3)\text{-alkoxy-(}C_1-C_6\text{)-alkyl}$, $(C_1-C_3)\text{-alkoxy-(}C_1-C_6\text{)-alkoxy}$ or mono- and di- $(C_1-C_6)\text{-alkylamino}$,

15

20

$R^{7''}$ is H, F, Cl, Me, Et, CF_3 , OCH_3 , OEt, OCH_2CF_3 , preferably H,

25 M^+ is $[SR^{18}R^{19}R^{20}]^+$ or $[PR^{21}R^{22}R^{23}R^{24}]^+$, where R^{18} to R^{25} are identical or different from one another and are substituted or unsubstituted $(C_1-C_{30})\text{-alkyl}$, substituted or unsubstituted $(C_1-C_{10})\text{-alkyl-(hetero)aryl}$, substituted or unsubstituted $(C_3-C_{30})\text{-(oligo)alkenyl}$, substituted or unsubstituted $(C_3-C_{10})\text{-(oligo)alkenyl-(hetero)aryl}$, substituted or unsubstituted $(C_3-C_{30})\text{-(oligo)alkynyl}$, substituted or unsubstituted $(C_3-C_{10})\text{-(oligo)alkynyl-(hetero)aryl}$, substituted or unsubstituted $(hetero)aryl$, and where two radicals R^{18}/R^{19} , R^{21}/R^{22} and R^{23}/R^{24} together may form an unsubstituted or substituted ring,

30

X is Me, Et, Pr, ⁱPr, CF₃, CCl₃, OMe, OEt, OⁱPr, OCHCl₂, OCH₂CCl₃, OCH₂CF₃, F, Cl, Br, SMe, SEt, NHMe, NMe₂, NEt, preferably OMe, OEt, Me, Cl

5 Y is Me, Et, Pr, ⁱPr, CF₃, CCl₃, OMe, OEt, OⁱPr, OCHCl₂, OCH₂CCl₃, OCH₂CF₃, F, Cl, Br, SMe, SEt, NHMe, NMe₂, NEt, preferably OMe, OEt, Me, Cl

and

10

Z is CH or N.

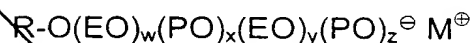
16. The use of one or more compounds of the formula (Ia) as claimed in claim 14 or 15 as herbicidal or plant-growth-regulating agent.

15

17. A process for preparing a compound of the formula (Ia) as claimed in claim 14 or 15.

18. The use of a compound of the formula (XVIII)

20



(XVIII)

25

in which

w, x, y and z independently of one another are integers from 0 to 50,

R is an unsubstituted or substituted C₈-C₄₀-hydrocarbon,

EO is an ethoxy unit,

PO is a propoxy unit and

30

M[⊕] is a phosphonium or sulfonium ion,

for preparing an agrochemical formulation.

Amen.
A